

IN THE CLAIMS:

1-21. (Canceled)

22. (New) A method for fabricating a steel article, comprising the steps of providing an iron-base alloy; thereafter vacuum melting the alloy to form a melt, while reducing a free oxygen content of the melt to less than about 10 parts per million by weight; thereafter adding calcium to the melt; and thereafter casting the melt to form a casting having more than about 0.5 weight percent aluminum.

23. (New) The method of claim 22, wherein the step of providing includes the step of providing the iron-base alloy having less than about 0.5 weight percent aluminum.

24. (New) The method of claim 22, wherein the step of providing includes the step of providing the iron-base alloy having more than about 0.3 weight percent carbon.

25. (New) The method of claim 22, wherein the step of vacuum melting includes the step of reducing the oxygen content of the melt by reacting the free oxygen with carbon.

26. (New) The method of claim 22, wherein the step of adding calcium includes the step of adding calcium to the melt in an amount sufficient to react with all of the free oxygen in the melt.

27. (New) The method of claim 22, wherein the method includes a step of adding aluminum to the melt to increase the aluminum content of the melt to more than about 0.5 weight percent aluminum, and wherein the step of adding calcium includes the step of

adding calcium prior to the step of adding aluminum.

28. (New) The method of claim 22, wherein the method includes a step of adding aluminum to the melt to increase the aluminum content of the melt to more than about 0.5 weight percent aluminum, and wherein the step of adding calcium includes the step of

adding calcium concurrently with the step of adding aluminum.

29. (New) The method of claim 22, wherein the method includes a step of adding aluminum to the melt to increase the aluminum content of the melt to more than about 0.5 weight percent aluminum, and wherein the step of adding calcium includes the step of

adding calcium after the step of adding aluminum.

30. (New) The method of claim 22, wherein the method includes a step of adding aluminum to the melt to increase the aluminum content of the melt to more than about 0.5 weight percent aluminum, and wherein the step of adding calcium includes the steps of

adding a first calcium addition prior to the step of adding aluminum,

adding a second calcium concurrently with the step of adding aluminum, and

adding a third calcium addition after the step of adding aluminum.

31. (New) The method of claim 22, wherein the step of casting includes the step of

casting the melt to form the casting having from about 0.5 to about 1.3 weight

percent aluminum.

32. (Original) The method of claim 1, including an additional step, after the step of casting, of
mechanically working the casting.

33. (Original) The method of claim 1, including an additional step, after the step of casting, of
mechanically working the casting to form a shaft.

34. (New) A method for fabricating a steel article, comprising the steps of
providing an iron-base alloy having less than about 0.5 weight percent aluminum;
thereafter

vacuum melting the alloy to form a melt; thereafter
adding aluminum to the melt to increase the aluminum content of the melt to from
about 0.5 to about 1.3 weight percent aluminum;
adding calcium to the melt; and thereafter
casting the melt to form a casting.

35. (New) The method of claim 34, wherein the step of vacuum melting
includes the step of

reducing a free oxygen content of the melt to less than about 10 parts per million
by weight.